

MacVector

PATENT DEPARTMENT
Appendices

Appendix 1. IUPAC-IUB Codes for Nucleotides and Amino Acids

References:

A. Cornish-Bowden (1985). *Nucl. Acids Res.* 13: 3021-3030. Nomenclature for incompletely specified bases in nucleic acid sequences: recommendations 1984.

IUPAC-IUB Commission on Biological Nomenclature (1968). *J. Biol. Chem.* 243: 3557-3559. A one-letter notation for amino acid sequences. Tentative rules.

Nucleic Acids:

A Adenine
C Cytosine
G Guanine
T Thymine
U Uracil

R puRine (A or G)
Y pYrimidine (C or T/U)
K Keto (G or T/U)
M aMino (A or C)
S Strong (C or G)
W Weak (A or T)

B not A (C or G or T/U)
D not C (A or G or T/U)
H not G (A or C or T/U)
V not T/U (A or C or G)
N aNy (A or C or G or T/U)

(see next page for amino acid codes)

EXHIBIT A